

**REMARKS****I. PRELIMINARY REMARKS**

Claims 16 and 24 have been amended in order to correct minor typographical errors. No claims have been added or canceled. Claims 1-31 remain in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

**II. REJECTION UNDER 35 U.S.C. § 112**

Claims 16-31 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically, the Office Action questioned the accuracy of the phrase "at least a portion of at least one of the protrusions defining a slanted parallelepiped shape." The rejection under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Reconsideration thereof is respectfully requested.

Applicant respectfully submits that the specification clearly describes embodiments wherein the entirety of a protrusion is a slanted parallelepiped shape, as well as embodiments wherein only a portion of a protrusion is a slanted parallelepiped shape. [See, e.g., Figure 3 and the specification at page 4, line 26 to page 5, line 5.] Accordingly, applicant respectfully submits that one of skill in the art who had reviewed the present application would understand what is meant by the phrase "at least a portion of at least one of the protrusions defining a slanted parallelepiped shape." The rejection under 35 U.S.C. § 112 is, therefore, improper and should be withdrawn.

### III. PRIOR ART REJECTIONS OF CLAIMS 1-15

#### A. The Rejections

Claims 1-5, 7-12, 14 and 15 have been rejected under 35 U.S.C. § 103 as being unpatentable over the combined teachings of U.S. Patent No. 6,464,047 to Arbesman (“the Arbesman ‘047 patent”) and U.S. Patent No. 5,732,800 to Spigener (“the Spigener ‘800 patent”). Claims 1-15 have been rejected under 35 U.S.C. § 103 as being unpatentable over the combined teachings of U.S. Patent No. 6,390,251 to Hasegawa (“the Hasegawa ‘251 patent”) and the Spigener ‘800 patent. The rejections under 35 U.S.C. § 103 are respectfully traversed. Reconsideration thereof is respectfully requested.

#### B. The Claimed Combinations

Independent claims 1 and 8 are directed to respective methods which include the step of “cutting a brake pad backing plate **out of a sheet having a plurality of discontinuities formed therein.**” The methods defined by claims 2-7 include the step recited in claim 1 and the methods defined by claims 9-15 include the steps recited in claim 8. The cited references fail to teach or suggest such methods.

#### C. Rejection Based on the Arbesman/Spigener Combination

The Arbesman ‘047 patent is directed to a method of forming a brake pad backing plate. The Arbesman ‘047 method includes the step of forming retaining structures 3 in a contact surface 2. In contrast to the claimed methods, however, the method disclosed in the Arbesman ‘047 patent involves forming discontinuities in the backing plate **after** the backing plate has been formed. Referring to column 6, lines 63-67, the Arbesman ‘047 patent specifically states that:

The method of manufacturing the backing plate 1 according to the present invention comprises **placing the backing plate on a flat surface** under a

conventional press and **punching the contact surface 2 of the backing plate** with a series of substantially parallel knives 10.

[Emphasis added.] Accordingly, even assuming for the sake of argument that the Arbesman method includes the step of cutting the backing plate 1 out of a sheet and that the retaining structures 3 are "discontinuities," there are no retaining structures 3 when the backing plate is cut out of the sheet. If there were, there would be no reason for the subsequent gouging of the backing plate 1 with the knives 10 to form the retaining structures 3.

The Spigener '800 patent, which has been cited for its cutting and stamping teachings, fails to remedy the aforementioned deficiencies in the Arbesman '047 patent. The background portion of the Spigener '800 patent discusses various systems for securing a brake pad to a backing plate. Referring to column 2, lines 22-33, the Spigener '800 patent indicates that an intermediate lamina (or "carrier") may be placed between the brake pad and the backing plate to secure the brake pad to the backing plate. The *lamina* is formed by stamping a shape corresponding to the shape of the backing plate out of a metal sheet and then punching holes into the stamped out shape. The *lamina* is then attached to the backing plate. The Spigener '800 patent also indicates that the use of *laminas* is disadvantageous because a new *lamina forming* stamp or die must be produced for each shape of backing plate. [Column 2, lines 28-33.] In other words, the portion of the Spigener '800 patent cited in the Office Action does not even relate to backing plates, it relates to laminas that are attached to backing plates after the backing plates have been formed. It is also noteworthy that the Spigener solution to the "lamina problem" is to spot weld a plurality of metal channel members 20 onto a backing plate *after* the backing plate has been formed. [See, for example, Figure 4 and column 3, lines 47-55.]

In view of the foregoing, applicant respectfully submits that there is nothing in the Spigener '800 patent that would have motivated a skilled artisan to form the Arbesman retaining structures 3 in a sheet prior to cutting the Arbesman backing plate out of the sheet. To the contrary, the Spigener '800 patent actually suffers from the same defect as the Arbesman '047 patent because the Spigener '800 patent suggests doing something

to the backing plate (i.e. spot welding the channel members to the backing plate) after the backing plate has been formed to improve the connection between the backing plate and the brake pad.

As the cited references fail to teach or suggest the method steps respectively recited in independent claims 1 and 8, whether viewed alone or in combination, applicant respectfully submits that the rejection of claims 1-5, 7-12, 14 and 15 under 35 U.S.C. § 103 is improper and should be withdrawn.

#### D. Rejection Based on the Hasegawa/Spigener Combination

The Hasegawa '251 patent is directed to a method of forming a brake pad backing plate. The Hasegawa '251 method includes the step of forming dimples 3a in a backing plate 3.<sup>1</sup> In contrast to the claimed methods, however, the method disclosed in the Hasegawa '251 patent involves forming the dimples in a backing plate *after* the backing plate has been formed. Referring to column 5, lines 57-64, the Hasegawa '251 patent specifically states that:

[A] back metal plate 3 *having no dimples* formed thereto is set between the upper mold 21 and the lower mold 22, and the upper mold 32 is pressed toward the lower mold 22, *performing a cold-working die pressing, by which dimples 3a are formed* to the portions where protrusions 21a and 22a are pressed, and a back metal plate 3 having predetermined dimples 3a is thereby manufactured.

[Emphasis added.] Accordingly, even assuming for the sake of argument that the Hasegawa method includes the step of cutting the backing plate 3 out of a sheet and that the dimples 3a are “discontinuities,” there are dimples when the backing plate is cut out of the sheet. If there were, there would no reason for the subsequent die pressing of the backing plate 3 to form the dimples 3a.

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<sup>1</sup> The Hasegawa '251 patent, which appears to be a literal Japanese to English translation, actually uses the term “back metal plate 3.”

The Spigener '800 patent, which has been cited for its cutting and stamping teachings, fails to remedy the aforementioned deficiencies in the Hasegawa '251 patent. Referring to the discussion above, the Spigener '800 patent suffers from the same defect as the Hasegawa '251 patent because the Spigener '800 patent suggests doing something to a backing plate (i.e. spot welding the channel members to the backing plate) after the backing plate has been formed to improve the connection between the backing plate and the brake pad. The Spigener '800 patent would not, therefore, have suggested forming the dimples 3a in a sheet prior to cutting the Hasegawa backing plate 3 out of the sheet.

As the cited references fail to teach or suggest the method steps respectively recited in independent claims 1 and 8, whether viewed alone or in combination, applicant respectfully submits that the rejection of claims 1-15 under 35 U.S.C. § 103 is improper and should be withdrawn.

#### **IV. PRIOR ART REJECTIONS OF CLAIMS 16-31**

##### **A. The Rejection**

Claims 16-31 have been rejected under 35 U.S.C. § 103 as being unpatentable over the combined teachings of the U.S. Patent No. 6,279,222 to Bunker ("the Bunker '222 patent") and U.S. Patent No. 6,524,681 to Seitz ("Seitz '681 patent"). The rejection under 35 U.S.C. § 103 is respectfully traversed. Reconsideration thereof is respectfully requested.

##### **B. The Claimed Combinations**

Independent claims 16 and 24 call for respective combinations of elements including, *inter alia*, "a plurality of protrusions extending outwardly from [a] base member, at least a portion of at least one of the protrusions defining a *slanted*

**parallelepiped** shape.”<sup>2</sup> The combinations defined by claims 17-23 include the elements recited in claim 16 and the combinations defined by claims 25-31 include the elements recited in claim 24. The cited references fail to teach or suggest such combinations.

### C. Discussion

The Bunker '222 patent discloses a variety of brake pad backing pates with a variety of different projections (i.e. the projections illustrated in Figures 3-7). In contrast to the claimed combinations, the Bunker projections do not have a **slanted parallelepiped** shape. The Seitz '681 patent discloses a clutch plate with a plurality pyramidal-shaped friction composites 20 (Figure 1 and column 6, lines 4-7) and, in an alternative embodiment, a plurality of truncated pyramidal-shaped friction composites 20' (Figure 2 and column 7, lines 1-5). Applicant respectfully submits that one of skill in the art would understand that pyramids, whether truncated or not, are not parallelepipeds. Additionally, the Seitz '681 patent indicates that the pyramids are right pyramids (column 6, lines 55-67) and there does not appear to be any indication that the pyramids should be slanted (see, e.g., column 7, line 66 to column 8, line 10).

Accordingly, even when combined in the hindsight manner proposed in the Office Action, the combined teachings of the Bunker '222 and Seitz '681 patents fail to produce the claimed combinations of elements. The rejection under 35 U.S.C. § 103 is, therefore, improper and should be withdrawn.

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<sup>2</sup> Applicant respectfully notes that a “parallelepiped” is a “body formed by four rectangles and two parallelograms.” See, e.g. T. Rieder, *How to Say What Stuff Looks Like! A Compendium of Descriptive Terminology For Preparing Patents ...*, Marcus Books (1995), page 36. [Attached hereto as Exhibit 1.] The term “slanted” has been used to indicated that the claimed parallelepiped is not a right parallelepiped.

**D. The “Alternate Equivalent” Issue Raised by the Office Action**

The Office Action states that, in the context of the Bunker ‘222 patent, a slanted parallelepiped shape is “an alternative equivalent choice of contoured projections used for the securement of a friction pad.” This conclusory statement is respectfully traversed because there is nothing in the record to support it.<sup>3</sup> Additionally, to the extent that the statement was intended to convey that the Examiner has taken “official notice” with respect to knowledge generally available in the art, applicant hereby traverses and requests that the Examiner provide an affidavit in accordance with MPEP § 2144.03 and 37 C.F.R. § 1.104(d)(2) to that effect. The affidavit should set forth the facts upon which the Examiner’s conclusions regarding the knowledge available in the art are based. Otherwise, applicant respectfully requests that the Examiner provide a prior art reference which shows that the claimed invention would have been obvious.

**V. CLOSING REMARKS**

In view of the foregoing, it is respectfully submitted that the claims in the application are in condition for allowance. Reexamination and reconsideration of the application, as amended, are respectfully requested. Allowance of the claims at an early date is courteously solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is respectfully requested to call applicant’s undersigned representative at (310) 563-1458 to discuss the steps necessary for placing the application in condition for allowance.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-0638. Should such

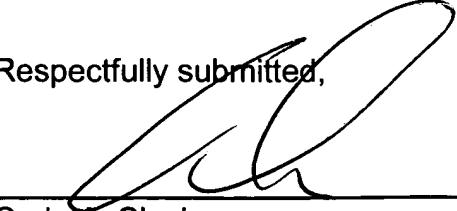
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<sup>3</sup> “In order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant’s disclosure or the mere fact that the components at issue are functional or mechanical equivalents.” MPEP § 2144.06, *citation omitted*.

fees be associated with an extension of time, applicant respectfully requests that this paper be considered a petition therefor.

3/25/05  
Date

Respectfully submitted,

  
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